## DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES Office of Structural Materials

Quality Assurance and Source Inspection

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Contract #: 04-0120F4

Cty: SF/ALA Rte: 80 PM: 13.2/13.9

File #: 69.28

# WELDING INSPECTION REPORT

Resident Engineer: Siegenthaler, Peter **Report No:** WIR-019152 Address: 333 Burma Road **Date Inspected:** 08-Jan-2011

City: Oakland, CA 94607

**Project Name:** SAS Superstructure **OSM Arrival Time:** 700 **OSM Departure Time:** 1900 **Prime Contractor:** American Bridge/Fluor Enterprises, a JV

Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

**CWI Name: CWI Present:** Yes Lv Li Qing No **Inspected CWI report:** Yes N/A **Rod Oven in Use:** Yes No No N/A N/A **Electrode to specification:** Yes No **Weld Procedures Followed:** Yes No N/A N/A **Qualified Welders:** Yes No **Verified Joint Fit-up:** Yes No N/A N/A Yes N/A **Approved Drawings:** Yes No **Approved WPS:** No Yes No N/A **Delayed / Cancelled:** 

**Bridge No:** 34-0006 **Component:** OBG

## **Summary of Items Observed:**

On this day CALTRANS OSM Quality Assurance(QA) Inspector Mr. Shrikant Utekar was present during the times noted above for observations relative to the fabrication of the SAS Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island in Shanghai, China. The QA Inspector observed and/or found the following:

BAY # 14

This QA Inspector randomly observed the following work in progress.

#### **OBG 14EAST**

This Quality Assurance (QA) Inspector observed ZPMC qualified welder 201087 performing the Shielded Metal Arc Welding process on weld 123 located at PCMK SEG3019BB. ZPMC QC Mr. Wang Xu was monitoring this welding operation. The welding variables recorded by QC appeared to comply with WPS-B-P-2213-Tc-u4b-Fcm-1.

This Quality Assurance (QA) Inspector observed ZPMC qualified welder 070007 performing the Shielded Metal Arc Welding process on weld 013 located at PCMK SEG3019BB. ZPMC QC Mr. Wang Xu was monitoring this welding operation. The welding variables recorded by QC appeared to comply with WPS-B-P-2213-Tc-u4b-Fcm-1.

# WELDING INSPECTION REPORT

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This Quality Assurance (QA) Inspector observed ZPMC qualified welder 066764 performing the Flux Cored Arc Welding process on weld 155 located at PCMK SEG3019E-2. ZPMC QC Mr. Wang Xu was monitoring this welding operation. The welding variables recorded by QC appeared to comply with WPS-B-T-2234-ESAB.

This Quality Assurance (QA) Inspector observed ZPMC qualified welder 044830 performing the Shielded Metal Arc Welding process on weld 013 located at PCMK SEG3019K. ZPMC QC Mr. Wang Xu was monitoring this welding operation. The welding variables recorded by QC appeared to comply with WPS-345-SMAW-2G (2F)-Fcm-Repair-1. Critical weld repair report identified as B-CWR 2667.

This Quality Assurance (QA) Inspector observed ZPMC qualified welder 066443 performing the Shielded Metal Arc Welding process on weld 002 located at PCMK SEG3019K-1. ZPMC QC Mr. Wang Xu was monitoring this welding operation. The welding variables recorded by QC appeared to comply with WPS-345-SMAW-3G (3F)-Fcm-Repair-1. Critical weld repair report identified as B-CWR2642.

This Quality Assurance (QA) Inspector observed ZPMC qualified welder 043661 performing the Shielded Metal Arc Welding process on weld 011 located at PCMK SEG3019K-1. ZPMC QC Mr. Wang Xu was monitoring this welding operation. The welding variables recorded by QC appeared to comply with WPS-345-SMAW-3G (3F)-Fcm-Repair-1. Critical weld repair report identified as B-CWR2726.

This Quality Assurance (QA) Inspector observed ZPMC qualified welder 070432 performing the Shielded Metal Arc Welding process on weld 100 located at PCMK SEG3019Y. ZPMC QC Mr. Wang Xu was monitoring this welding operation. The welding variables recorded by QC appeared to comply with WPS-345-SMAW-2G (2F)-Fcm-Repair-1. Critical weld repair report identified as B-CWR2615.

This QA Inspector observed ZPMC personnel performing Ultrasonic testing for the weld between SA3362 to bottom panel (SEG3019BB-125) and SA3360 to bottom panel (SEG3019BB-081), During the Ultrasonic testing ZPMC personnel discovered 35 linear indications in the weld SEG3019BB-125 and 30 linear indications in the weld SEG3019BB-081.

### **OBG 13CE**

This Quality Assurance (QA) Inspector observed ZPMC personnel performing heat straightening, member identified as anchorage plate DP3104. Distortion appeared to be caused by welding. ZPMC Quality Control (QC) inspector identified as Mr. Lv Li Qing was present to monitor the heat straightening process. The heat straightening appeared to comply with heat straightening Report HSR1 (B)-9980.

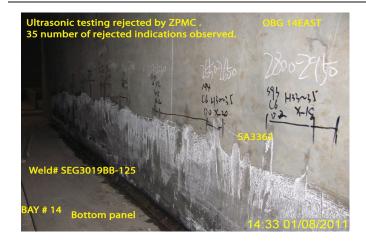
#### **ULTRASONIC TESTING**

This QA Inspector received ABF Notice of Witness of Inspection Request Number 01072011-1. The NWIT listed one of the welds ready for review as DP3146-001-009. This QA Inspector performed Visual inspection prior to ultrasonic testing (D- scan), during the visual inspection this QA Inspector observed approximately 3mm of concavity at the area of inspection, this QA Inspector shows to ABF QA and reject this weld in visual inspection, as per ABF QA they will repair this weld and re-notify. See attached photo.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

# WELDING INSPECTION REPORT

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# **Summary of Conversations:**

No significant conversations were reported on this date.

#### **Comments**

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang, +(86) 1500 042 2372, who represents the Office of Structural Materials for your project.

Inspected By:	Utekar,Shrikant	Quality Assurance Inspector
Reviewed By:	Patterson,Rodney	QA Reviewer